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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,372	02/25/2004	Shiying Zheng	85588RLO	3400

7590

09/01/2006

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EXAMINER

GARRETT, DAWN L

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/786,372

Applicant(s)

ZHENG ET AL.

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,11,12,14,15,17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-10,13,16 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to the RCE filed April 5, 2006 and the amendment and response to the election of species requirement filed July 20, 2006. Applicant elected Formula (IV) wherein Ar₉ is a phenyl group. Since X has been selected as phenyl rather than as a plurality of groups, claim 3 is withdrawn. Claims 1, 4-10, 13, 16, and 19 are under consideration. Claims 2, 3, 11, 12, 14, 15, 17 and 18 are withdrawn as non-elected.
2. The rejection of claims 1, 3, 4, 7 and 8 under 35 U.S.C. 102(b) as being anticipated by Fujiyama et al. (JP 08-113622) is withdrawn due to the amendment filed April 5, 2006.
3. The rejection of claims 1 and 4-10 under 35 U.S.C. 103(a) as being unpatentable over Leclerc et al. (US 6,630,254) in view of Fujiyama et al. (JP 08-113622) is withdrawn due to the amendment filed April 5, 2006.
4. The rejection of claims 1, 3-5, 8 and 9 under 35 U.S.C. 112 first paragraph set forth in the Office action mailed January 13, 2006 is withdrawn due to the amendment filed April 5, 2006.

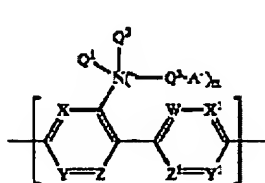
Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-10, 13, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pei (US 2002/0193551) in view of Nukada et al. (US 5,604,064). Pei discloses conjugated electroluminescent polymers wherein monomers may comprise the following formula:

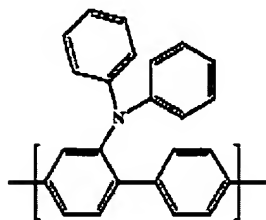
Art Unit: 1774



(viii)

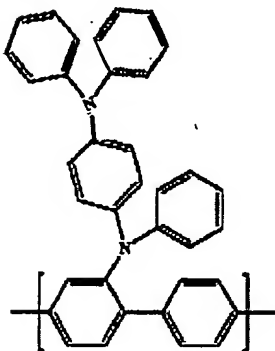
(see par. 21).

X, Y, and Z in the formula may be CH. A resulting polymer may include the following:



(see par. 81).

Although Pei does not *exemplify* a compound wherein one of the aryl groups attached to the nitrogen is substituted with an amino group, Pei does teach that Q^1 and Q^2 may be substituted aryl groups (see par. 55). Pei defines the word “substituted” as at least one hydrogen atom bound to a carbon atom is replaced with a function group such as amino (see par. 47). Although Pei does not specifically teach diphenylamino as an amino group, Nukada teaches it is well known in the art that amino groups for electroluminescent device compounds may include specifically diphenylamino groups (see Nukada col. 4, lines 34-35). It would have been obvious to one of ordinary skill in the art to have formed a “Q” substituted aryl group having an amino group as taught by Pei wherein the amino is a diphenylamino group as taught by Nukada, because Nukada teaches that diphenylamino is a well known amino substitution group. The resulting repeating unit is the species under consideration:



With regard to claim 5 and the requirement of additional light emitting material, Pei teaches a blend may be formed of the inventive polymer and another polymer such as MEH-PPV and BCHA-PPV (see par. 117). Pei further teaches incorporating color modifiers, phosphorescent dyes and the like (see par. 135).

With regard to claims 4, 6, and 7, Pei teaches the electroluminescent coating material is coated between electrodes and forms an electroluminescent material layer (see par. 138).

Response to Arguments

7. Applicant's arguments with respect to the claims filed April 5, 2006 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1774

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dawn Garrett
Primary Examiner
Art Unit 1774

August 29, 2006